AN214822

CYW20730: Downloading Firmware to CYW20730 Modules Using Bluetool

Associated Part Family: CYW20730

This document describes the step-by-step process of downloading the firmware to CYW20730 modules using BlueTool™ software.

1 Introduction

This document describes the step-by-step process of downloading the firmware to CYW20730 modules using BlueTool™ software.

1.1 Cypress Part Numbering Scheme

Cypress is converting the acquired IoT part numbers from Broadcom to the Cypress part numbering scheme. Due to this conversion, there is no change in form, fit, or function as a result of offering the device with Cypress part number marking. The table provides Cypress ordering part number that matches an existing IoT part number

Table 1. Mapping Table for Part Number between Broadcom and Cypress

Broadcom Part Number	Cypress Part Number
BCM20730	CYW20730

2 IoT Resources

Cypress provides a wealth of data at http://www.cypress.com/internet-things-iot to help you to select the right IoT device for your design, and quickly and effectively integrate the device into your design. Cypress provides customer access to a wide range of information, including technical documentation, schematic diagrams, product bill of materials, PCB layout information, and software updates. Customers can acquire technical documentation and software from the Cypress Support Community website (http://community.cypress.com/).

2.1 Acronyms and Abbreviations

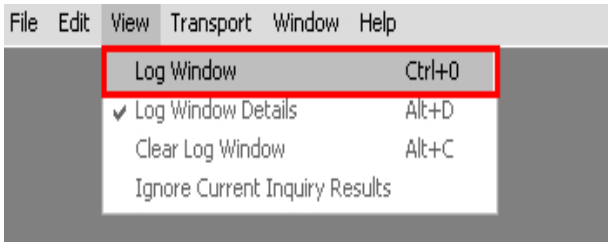
In most cases, acronyms and abbreviations are defined on first use.

For a comprehensive list of acronyms and other terms used in Cypress documents,

go to http://www.cypress.com/glossary.

3 Using BlueTool to Download Firmware

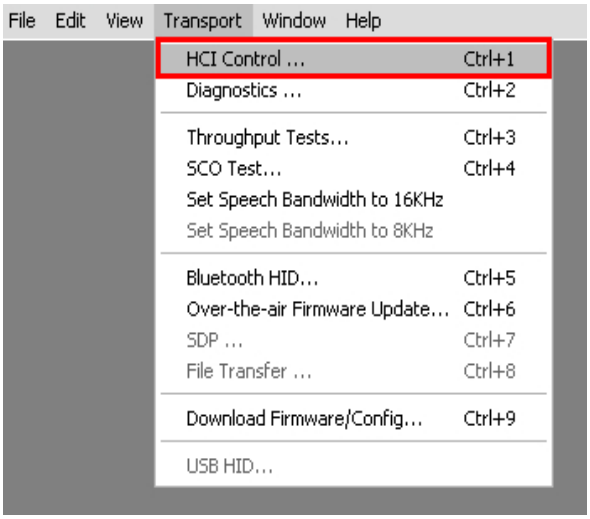
1. Connect the CYW20730 reference board(s) to the computer via the serial UART cable, then power on the device.
2. Open BlueTool.
3. From the **View** menu, select **Log Window**.



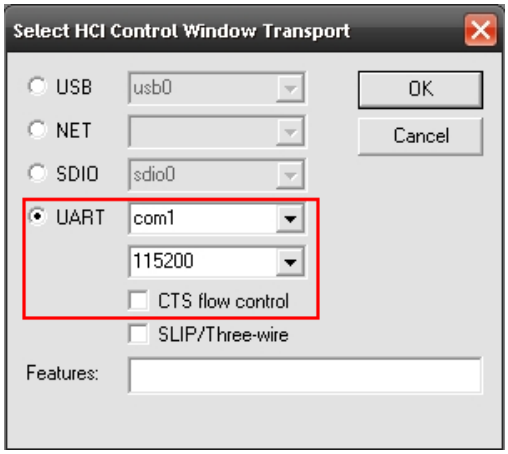
A blank Log Window appears.



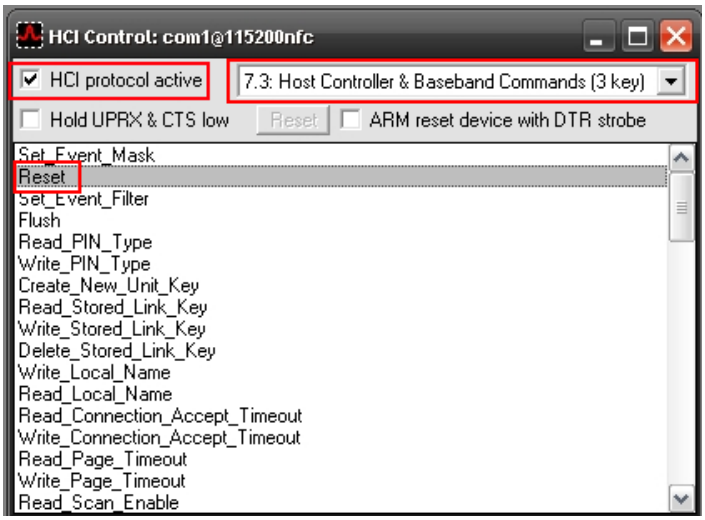
4. From the **Transport** menu, select **HCI Control**.



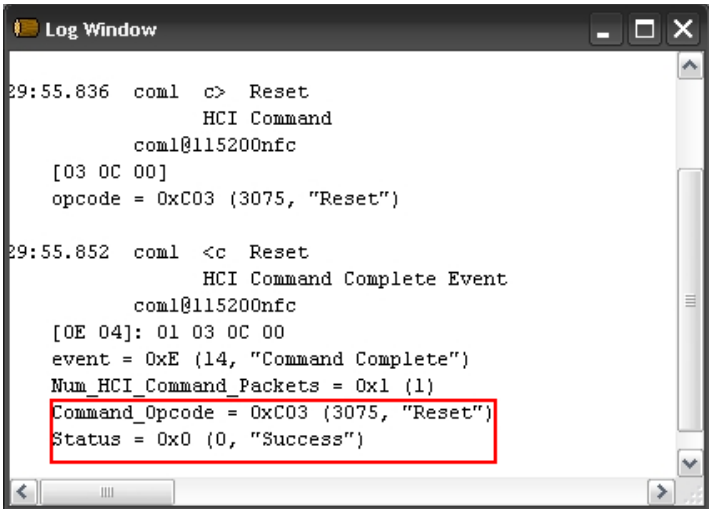
5. In the Select HCI Control Window Transport window, select the **UART** option. Select **com1** as the com port and **115200** as the baud rate. Make sure that **CTS flow control** is *not* selected.
6. Click the **OK** button.



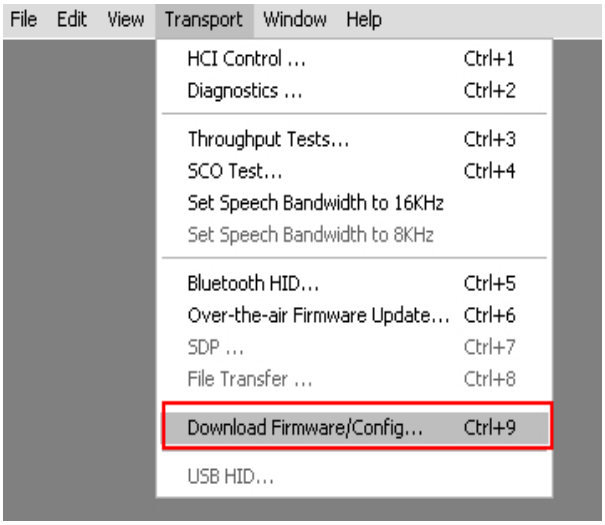
7. In the HCI Control command window, do the following:
   a. The CYW20730 must be connected to the PC and powered up (see Step 3 on page 1).
   b. Select the **HCI protocol active** option.
   c. From the HCI Menu list, select **7.3: Host Controller & Baseband Commands (3 key)**.
   d. Double-click the **Reset** command.



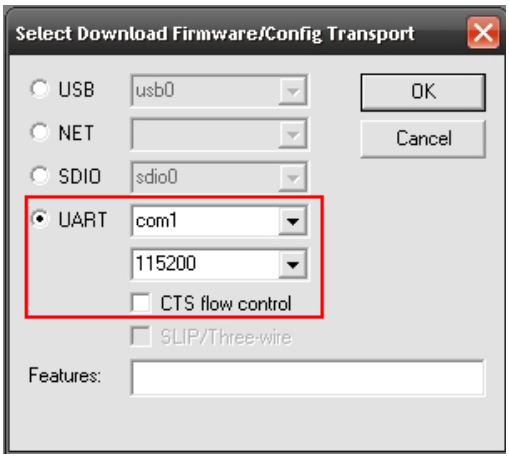
After a successful reset, the log window displays the reset status as “Success”.



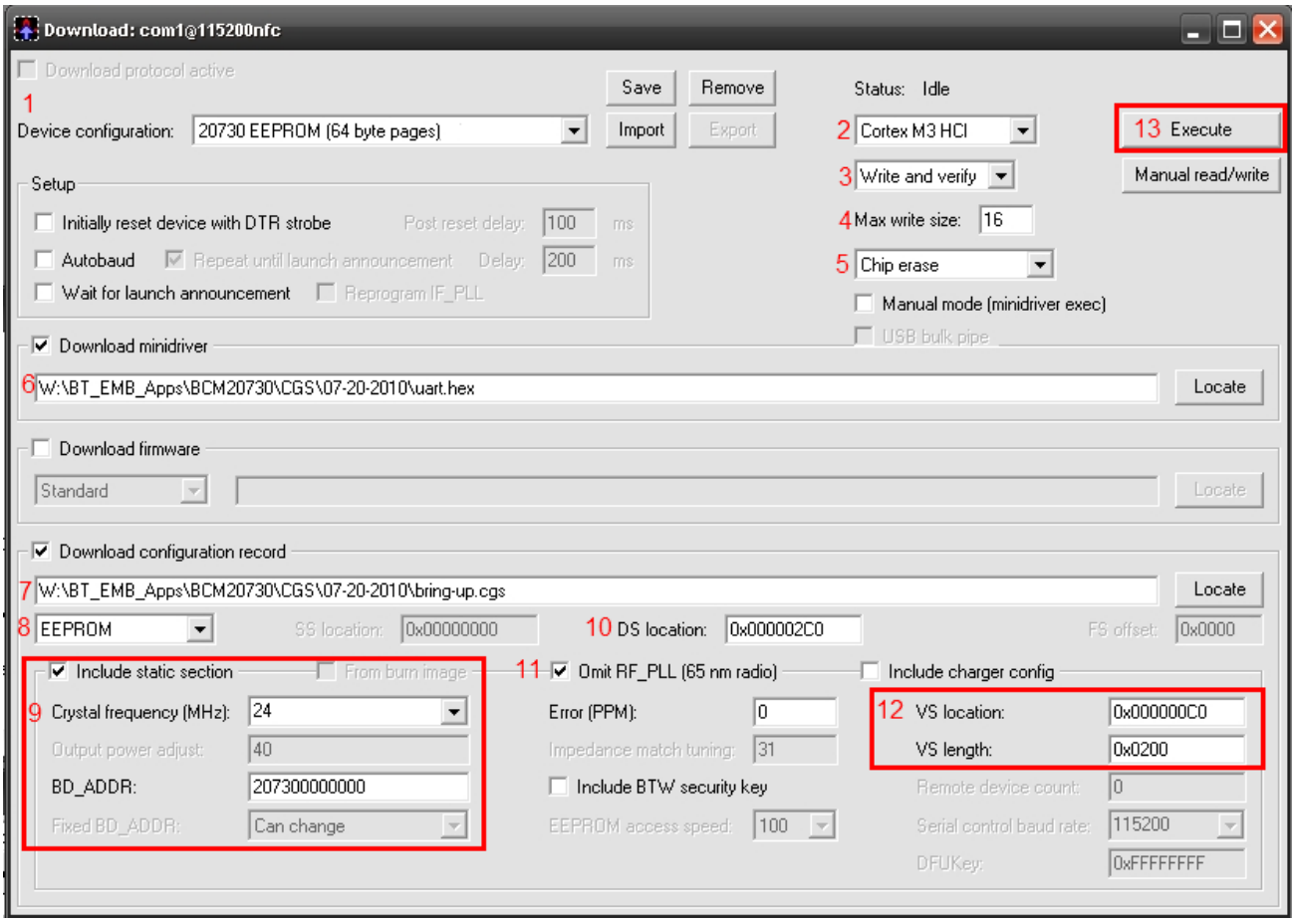
8. From the **Transport** menu, select **Download Firmware/Config**.



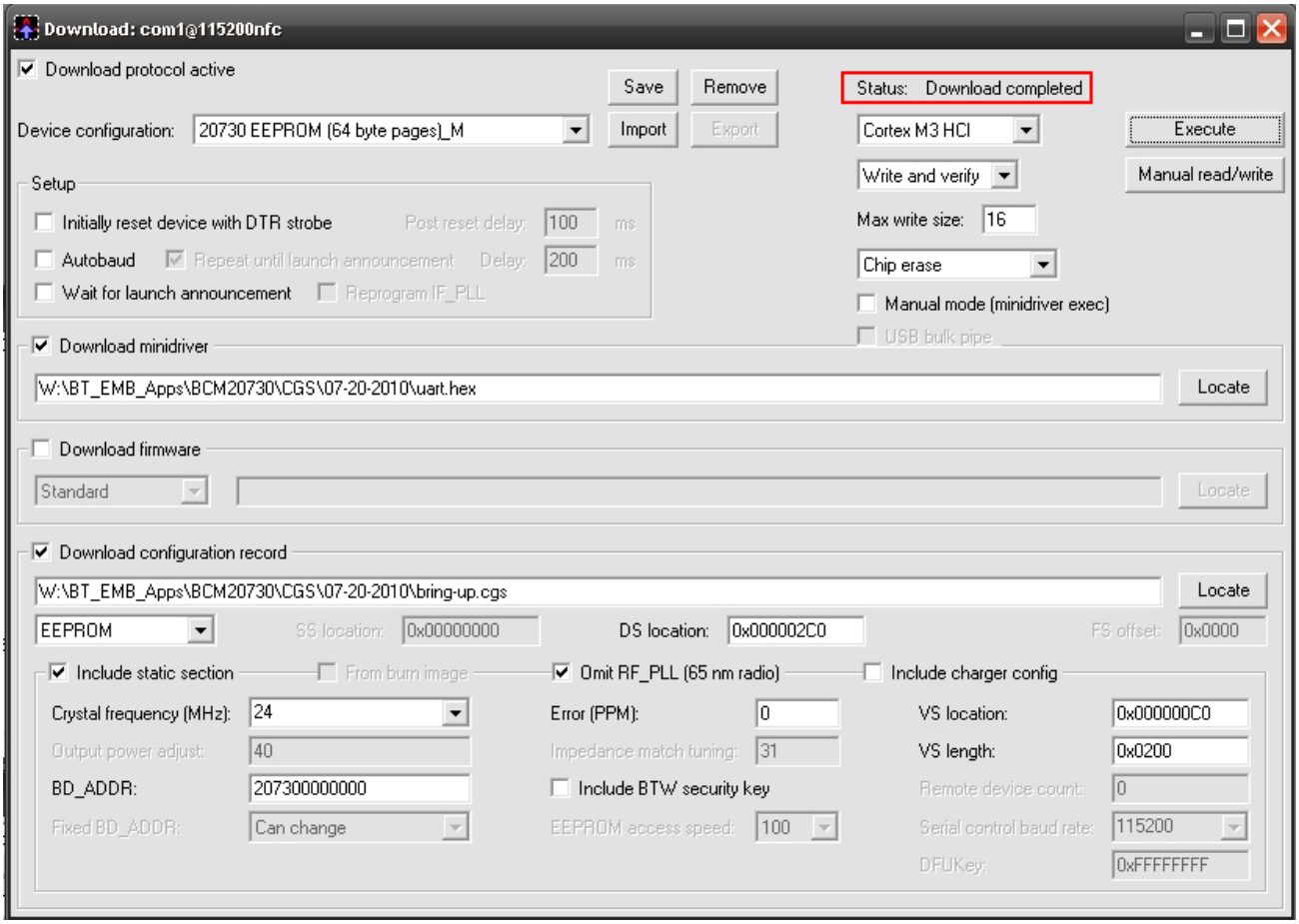
9. In the Select Download Firmware/Config Transport window, select the **UART** option. Select **com1** as the com port and **115200** as the baud rate. Make sure that **CTS flow control** is *not* selected.
10. Click the **OK** button.



11. In the Download window, set the following options:
    - 1. From the **Device configuration** list, select **20730 EEPROM (64 byte pages)**.
    - 2. Select **Cortex M3 HCI**.
    - 3. Select **Write and verify**.
    - 4. For **Max write size**, enter **16**.
    - 5. Select **Chip erase**.
    - 6. Select **Download minidriver**, then click **Locate** to browse for the uart.hex file.
    - 7. Select **Download configuration record**, then click **Locate** browse for the desired cgs/cgr file.
    - 8. Select **EEPROM** as the memory.
    - 9. Select **Include static section**. From the **Crystal frequency** list, select **24** MHz. For **BD_ADDR**, enter the desired BD Address.
    - 10. For **DS location**, enter **0x000002C0**.
    - 11. Select **Omit RF_PLL (65nm radio)**.
    - 12. For **VS Location**, enter **0x000000C0**. For **VS length**, enter **0x0200**.
    - 13. Click **Execute** to begin the download configuration.



Once the download is finished, the status changes to **Download completed**.



12. Cycle the power on the device, and the CYW20730 will be ready for normal operation.

Document History Page

Document Title: AN214822 - CYW20730: Downloading Firmware to CYW20730 Modules Using Bluetool Document Number: 002-14822				
Rev.	**ECN No.**	**Orig. of Change**	**Submission Date**	**Description of Change**
**	–	–	12/20/2010	20730-AN100-R: Initial release
*A	5466532	UTSV	11/18/2016	Updated in Cypress template
*B	5828011	AESATP12	07/21/2017	Updated logo and copyright.

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